

NAVAL UNDERWATER SYSTEMS CENTER
NEWPORT, RHODE ISLAND

NUSCINST 5322.2A
NA:MAO:ear
22 June 1971

NUSC INSTRUCTION 5322.2A

From: Commanding Officer

Subj: Project REFLEX

Ref: (a) DNL ltr MAT 0332:RLB Ser 138 of 20 Apr 1970

Encl: (1) Sample Staffing Plan

1. Purpose. To provide guidance to all levels on Command policy concerning implementation of Project REFLEX (Resource Flexibility) at the Naval Underwater Systems Center and to enlist their interest and support in this program in accordance with reference (a).
 2. Cancellation. NUSC Instruction 5322.2 is hereby canceled.
 3. Background. Studies of DOD laboratories by the Civil Service Commission, the General Accounting Office, and the Military Departments have suggested weaknesses in the planning, programming and budgeting system for coordinating the entire manpower ceiling (and manpower allocation) process with funding and workloads within the in-house R&D Centers. Accordingly, the Secretary of Defense directed members of his staff and the three military services to design and conduct a limited and carefully controlled experiment, designated Project REFLEX. The purpose of the experiment, or demonstration, will be to determine whether it is feasible to use fiscal controls alone instead of the present systems of the combination of fiscal controls and manpower ceilings to manage operations of the in-house RDT&E organizations. This Center was selected as one of the three Navy Department RDT&E activities to test the effectiveness of this approach.
 4. Objectives. The objectives of Project REFLEX are:
 - a. To facilitate changes in the mix of the scientific staff as needed.
 - b. To enhance the quality of R&D within the Center structure.
 - c. In general to give the Center directors increased flexibility in getting jobs done.
- If this experiment proves successful, the DOD may apply its principles more broadly to other organizations, both RDT&E and non-RDT&E.
5. Project REFLEX Information Requirements. Under Project REFLEX three local systems will be required for implementation of the program which are:

22 June 1971

a. An operating budget and related reports that will provide good visibility of workload and all resources.

b. A manpower statistical information system which will show pre-REFLEX conditions and periodic reporting to show any changes in these statistics under REFLEX.

c. An appraisal system for measuring periodically changes in resources baseline data versus accomplishment. This will be done by examination of pre-determined factors, examples of which are:

(1) Changes in patterns of work or functions.

(2) Changes in skill and discipline mix and overall size of staff.

(3) Improvements in Center environment and Center quality.

6. Policy. The policy and broad responsibilities in connection with the implementation of Project REFLEX are delineated herein.

a. Monthly financial reports are prepared by the Program and Financial Management Staff (Code F) for review by Center management. In reviewing these reports, Center management makes assessments of current staffing levels and expected funding and provides guidance regarding revisions to staffing plans. In addition, guidance regarding in-house/out-of-house ratios, staffing targets, and relative program balance for current and future years is provided. The semi-annual program summary will reflect this guidance and will be used to provide the basis for manpower planning under Project REFLEX.

b. Upon review and approval by Center management, the staffing plan evolving from the program summaries will be used as the baseline for REFLEX manpower management. A sample staffing plan is shown in enclosure (1). This staffing plan will be included in the official issue of the semi-annual Center Program Summary. The various Directors will be responsible for administering the staffing plan. Their total manpower commitments may not vary from the plan by more than 3% without approval of the Commanding Officer and the Technical Director. When there is a significant change (10%) in expected funding level various Directors should consult Center Management to determine if revisions to the staffing plan are necessary.

c. Division heads will be responsible for documenting in detail the justification for each new hire based on an appropriate combination of the following criteria:

(1) Position results in an increase in in-house work of a commensurate dollar.

(2) Position will provide specific enhancement of Center work output quality.

22 June 1971

(3) Position is needed to respond to new specified programs, or it represents a capability improvement in the spectrum of Center expertise.

(4) Position Management Program has been complied with.

(5) Change will improve output in quality or quantity as specified. Under no circumstances will a position be requested to be filled on the basis of fund availability only.

If the justification meets the necessary hiring criteria, Directorate Heads shall submit the request to the Manpower Resources Directorate (Code M). Code M will furnish a copy of the Director-approved Form 52 to the Management Services Department (Code NA3). Code F will notify Directorate members of under-funded program areas and assist Directors in identifying excess personnel and in informing Code M. Code NA3, acting as a central clearing house, shall review the request for information and appropriate recommendation as Project REFLEX coordinator.

d. The Center will conduct post-audits of manpower practices quarterly.

7. Staffing Plan Review Board. To expedite the procedures by which changes to the staffing plan can take place, a Staffing Plan Review Board is established. The permanent members of the Board are as follows:

Commanding Officer	Chairman
Technical Director	Member
Program and Financial Manager	Member
Manpower Resources Director	Member
Associate Director for Center Logistics	Member
Head, Management Services Department	Executive Secretary (non-voting)

Requests for changes to staffing plans will be routed to Code F. Code F is authorized to approve minor changes, informing Codes NA and M. Code F will notify NA3 to call a meeting of this Staffing Plan Review Board for requests for major changes, or changes which require revised mission or functions. The Board, in addition, will meet quarterly to review the status of the Center's Staffing and to establish policy.

8. Responsibilities. The effective resolution of the myraid of problems inherent in this program will depend upon the support of all management and functional levels. In addition, the following specific responsibilities are assigned:

a. Code NA3 is designated Project REFLEX coordinator for the Center. This function involves responsibility for providing information and procedures necessary for administration and evaluation of Project REFLEX. In obtaining information for evaluation Code NA3 shall consult with all principle staff heads as well as Directorate Heads and submit recommendations to the Commanding Officer and Technical Director for approval.

NUSCINST 5322.2A
22 June 1971

b. Code NA3 will develop and administer a system for appraisal of results under Project REFLEX including establishment of standard factors against which measurements may be made.

c. Code F is responsible for recommending funded manning levels to the Commanding Officer and Technical Director.

d. Code M will review and evaluate requested position changes in support of the Position Management Program and will conduct reviews as required and develop personnel data for externally required REFLEX reports.

e. The Directorate Heads will review and evaluate requested position changes as required to evaluate functional improvement and effectiveness.

f. Code F will develop the necessary fiscal controls, budgets and data for externally required REFLEX financial reports.

9. Retreat Under REFLEX. All of the above procedures and responsibilities are outlined in anticipation of a holding or expansion situation. Project REFLEX must also be flexible in operation to accomodate retrenchments for varying reasons, such as lack of workload, excess of skills, termination of project; therefore, retreat procedures to a lower staffing level may at times be necessary. In these cases the following actions will occur:

a. Code F shall: (1) verify the projection of workload and/or funds, and notify the Directorate Heads of the situation, and (2) notify the Directorate Heads of other areas which can accept excess personnel.

b. The Directorate Heads will evaluate these inputs and either direct reassignment of personnel to other programs in other divisions or notify Code M of personnel excess to Center requirements.

c. Code M will effect reduction-in-force procedures.

10. Reports. Project REFLEX will require many external and internal reports and evaluations. Responsibility for submitting these reports is as follows:

a. Personnel reports will be developed by Code M.

b. Financial reports will be developed by Code F.

c. Code NA3 will coordinate the submission of all reports required under Project REFLEX.

R. T. Lundy
R. T. LUNDY

Distribution:
All Center Supervisors

FY 71

NUSCINST 5322.2A
22 June 1971STAFFING PLAN

CODE	ORGANIZATIONAL ELEMENT	FUNDED MANNING LEVEL	OVERHEAD	
			DIRECT	IND G&A
A	Commanding Officer			
B	Technical Director			
BD	Deputy Director			
AC	Chief Staff Officer			
C	Consultants and Special Staff			
F	Program and Financial Management Staff			
FB	Assist for Finance			
FR	Internal Review Staff			
A1	Program Coordination Department			
FA2	Resources Information Department			
FB1	Budget Department			
FB2	Accounting Department			
P	Plans and Analysis Directorate			
PC	Consultants			
PA1	Long Range Planning Department			
PA2	Warfare Analysis Department			
PA3	Systems Analysis Department			
PA4	Computer Laboratory			
M	Manpower Resources Directorate			
MC	Applied Behavioral Sciences and Consultants Group			
ML	Labor Relations Advisor			
MA1	Manpower Utilization Department			
MA2	Personnel Management Services Department			
MA3	Human Resources Staffing & Development Department			

Enclosure (1)

NUSCINST 5322.2A
22 June 1971

CODE	ORGANIZATIONAL ELEMENT	FUNDED MANNING LEVEL	DIRECT	OVERHEAD	
				IND	A&G
T	Science & Technology Directorate				
TC	Consultants				
TA	Associate Director for Sonar Research				
TB	Associate Director for Weapons Research				
TA1	Ocean Science Department				
TBX	Systems Research Staff				
TBI	Energy Conversion Department				
TB2	Guidance and Control Department				
TD1	Sonar Technology Department				
S	Systems Development Directorate				
SA	Associate Director, Sensors				
SB	Associate Director, Weapons				
SA5	Advanced Acoustic Communications Project				
ST	Torpedo Mk 48 Tech. Eval.				
SA1	Submarine Sonar Department				
SA2	Surface Ship & Surveillance Sonar Department				
SA3	Special Forces Department				
SA4	Submarine Electro-Magnetics Systems Department				
SM	Systems Integration Group (Program Managers)				
SB1	Combat Systems Control Department				
SB2	Launcher Department				
SB3	Weapons Department				
R	Fleet Readiness Directorate				
RM	Project Managers - Submarine - Surface - Air Systems				
RS	Subroc Weapon System Project				
RA1	Weapons Engineering Department				
RA2	Shipborne Equipment Engineering Department				
RA3	Fleet Services Department				
RA4	Sonar and Communications Engineering Departments				
E	Engineering Directorate				
EP	Planning & Logistics Staff				
EM	Program Managers - Tech. Eval.				
EAL	Design Department				

22 June 1971

CODE	ORGANIZATIONAL ELEMENT	FUNDED MANNING LEVEL	OVERHEAD	
			DIRECT	IND A&G
EA2	Industrial Department			
EA3	Environmental Engineering Department			
EA4	Instrumentation & Measurement Department			
EA5	Quality Evaluation & Engineering Department			
W	Test and Evaluation Directorate			
WA	Officer in Charge AUTECH			
WA1	AUTECH Management Department			
WA2	Range Development Department			
N	Officer in Charge, Newport Laboratory/ Director, Center Logistics			
NA	Associate Director, Center Logistics			
NP	Public Affairs Officer			
NS	Safety Office			
NA1	Administrative Services Department			
NA2	Facilities Department			
NA3	Management Services Department			
NA4	Supply Department			
NF	Field Stations			
L	Officer in Charge, New London Laboratory/ Director, Center			
LA	Associate Director, Center Operations			
LP	Public Affairs Officer			
LS	Safety Officer			
LA1	Technical Information Department			
LA2	Fleet Liaison/Operations Department			
LA3	Security Department			
D	Officer in Charge Bermuda Detachment			

EVALUATION OF PROJECT REFLEX PERFORMANCE
AT NUC AND NUSC

Prepared by

NRAC Laboratory Advisory Board on Undersea Warfare

for

Director, Navy Laboratories

0 0 0 1 2 0 1 3 0 5 4

Naval Materiel Command

December 1973

INTRODUCTION

The Laboratory Advisory Board on Undersea Warfare, as part of its responsibilities, monitors the programs of the Naval Undersea Center and the Naval Underwater Systems Center. Both of these Centers were operated as Project REFLEX organizations since the inception of the experiment on 1 July 1970. With the three-year demonstration period now concluded, the Advisory Board was requested to provide its assessment of the degree of success achieved by Project REFLEX operations.

In preparing this report, the Advisory Board draws on its observation of Center activities during the entire trial period; periodic reports and analyses of REFLEX were included as agenda items at a number of the Advisory Board meetings. Board members have also had the opportunity to review the material submitted by the two Centers in response to the GAO Questionnaire for REFLEX laboratories.

DISCUSSION

00012013055
The dominant theme which emerges from a review of the Project REFLEX trial period is that, while definite advantage was gained from the ability to operate under fiscal controls and without the usual manpower controls, any attempt to validate this conclusion through statistical evidence is unrealistic. During the three-year period both Centers substantially increased the size of their operations; NUC increased its total budget by 66% during the period FY 1970-73, while the corresponding increase for

NUSC was 53%. In the face of such rapid growth, any effort to isolate the effects of a single type of management control is extremely difficult.

Moreover, it must be remembered that while REFLEX operations did remove manpower ceilings, other factors prevented the exercise of truly flexible management of manpower. Civil Service regulations continue to hinder the optimum use (or termination) of civilian personnel. The requirements of achieving certain grade point averages, although readily accomplished by the two Centers, nevertheless introduced extraneous considerations in the efforts to mold a staff with maximum effectiveness.

It is clear, nevertheless, that positive results were achieved by REFLEX and that no negative side effects were experienced. The managements of both Centers were able to plan and implement their staff needs on a realistic basis and with a minimum of unnecessary bureaucratic interchanges between the Center management and higher headquarters. In addition to conserving management time and effort, the two Centers were able to flexibly readjust their staffs to meet changing needs without undue delays. The REFLEX reports submitted by the two Centers detail several well defined instances of the advantages gained from this capability.

One of the dangers of REFLEX-type operations, according to early critics, was that they would result in a greater degree of in-house self-sufficiency and would lessen the extent of industrial participation in Center

programs. This did not, in fact, happen. In the case of both NUC and NUSC, the ratio of in-house effort to outside contractor effort remained essentially constant over the entire three-year period. It seems clear that Naval Materiel Command policy and program needs are the controlling factors in determining the fundamental directions of Center operations, rather than the freedom inherent in the in-house control of staffing.

The Laboratory Advisory Board on Undersea Warfare has repeatedly stated its conviction that Navy laboratories should be given an increased degree of autonomy in the conduct of their internal operations. Program objectives and funding levels should be established through appropriate Headquarter channels, but internal Center functions should be the responsibility of Center management, including decisions as to how best to achieve the assigned program goals. REFLEX is a step in this direction, and based on the evidence available it is a justification for an even broader movement in these same directions.

0 0 0 1 2 0 1 3 0 5 7

In terms of management philosophy, the present system imposes dual controls on manpower, each with the same objective but frequently leading to harmful compromises in order to satisfy both. In commercial practice, a dual system of controls of this kind is rarely used, except possibly to cope with a short-time emergency planning situation. In doing away with one artificial set of controls, REFLEX is a step toward less artificial and more rational management.

CONCLUSION

The Laboratory Advisory Board on Undersea Warfare concludes that Project REFLEX has demonstrated the advantages of laboratory operations under fiscal controls only (i.e., eliminating controls over staffing), and recommends its continuation and extension to the full spectrum of Navy laboratories.

0 0 0 1 2 3 1 3 0 5 0

TABLE OF CONTENTS

TAB A	DNL letter (20 Apr 1970) summarizing basis, purposes, objectives and duration of REFLEX
TAB B	SECDEF Memo (30 Dec 1969) approving concept and discussing methodology, baseline criteria, and appraisal factors.
TAB C	DDR&E General Instructions (29 Apr 1970) covering appraisal processes and quantitative data needed.
TAB D	DDR&E Memo (26 Jan 1970) discussing Service DOL's interpretations of tasks, objectives and measurement indices.

0 0 0 1 2 3 4 5 9

PROJECT REFLEX REPORT - FY 1973
SUMMARY SOURCES OF REVENUE
Naval Underwater Systems Center, Newport, Rhode Island
(dollars in thousands)

(TAB A)

	BEGINNING OF FISCAL YEAR				1 JUL 72-30 JUN 73		AS OF 30 JUN 1973	
	UNBILLED BALANCE	WORK IN PROCESS	NET AVAIL	ORDERS RECEIVED	BILLING	UNBILLED BALANCE	WORK IN PROCESS	NET AVAIL
A. DEPARTMENT OF THE NAVY	67,802	10,891	56,911	105,689	122,002	51,489	177	51,312
RDT&E	22,183	3,486	18,697	47,684	53,202	16,665	98	16,567
OTHER PROCUREMENT, NAVY	26,429	4,201	22,228	28,821	34,729	20,521	16	20,505
SHIPBUILDING & CONVERS	9,570	465	9,105	4,553	6,389	7,734	41	7,693
OPERATION & MAINTENANCE	8,167	2,405	5,762	20,277	24,499	3,945	15	3,930
NAVY INDUSTRIAL FUND	1,134	320	814	2,742	2,810	1,066	2	1,064
OTHER NAVY	319	14	305	1,612	373	1,558	5	1,553
B. OTHER DOD	215	7	208	894	706	403	87	316
C. OTHER GOVERNMENT	389	84	305	424	308	505	79	426
NON APPROPRIATED FUNDS	131	30	101	321	221	231	15	216
TOTAL REVENUES	68,537	11,012	57,525	107,328	123,237	52,628	358	52,270
TOTAL IN-HOUSE	54,830	8,810	46,020	85,862	98,590	42,102	286	41,816
TOTAL IN-HOUSE NON RDT&E	29,060	4,669	24,391	45,507	52,253	22,314	152	22,162
TOTAL OUT-OF-HOUSE	13,707	2,202	11,505	21,466	24,647	10,526	72	10,454

25 September 1973

Enclosure (1)

PROJECT REFLEX REPORT FY 1973
ANALYSIS OF COSTS INCURRED

(EXHIBIT 060106-2, TAB B)

Naval Underwater Systems Center, Newport, Rhode Island
(dollars in thousands)

	FY 73 CUMULATIVE				
	FY 1972 Actual (1)	1st Qtr Actual (2)	2nd Qtr Actual (3)	3rd Qtr Actual (4)	4th Qtr Actual (5)
<u>DIRECT COSTS</u>					
Materials, Supplies & Parts Used	10,135	2,636	5,592	8,864	13,371
Salaries & Wages - Regular Time	32,237	7,207	15,809	24,921	34,405
Salaries & Wages - Overtime	2,403	434	1,115	1,629	2,158
In-house Contractual Services	14,164	3,219	7,893	14,268	21,867
Other Costs	4,197	1,106	2,160	3,523	4,478
Total Direct Costs	63,136	14,602	32,569	53,205	76,279
Non-Add: Military Personnel Services	597	51	168	197	304
<u>ALL INDIRECT COSTS OTHER THAN ADMINISTRATIVE</u>					
Materials, Supplies & Parts Used	327	119	171	280	432
Salaries & Wages - Regular Time	5,635	1,422	2,937	4,608	6,407
Salaries & Wages - Overtime	75	13	38	46	53
In-house Contractual Services	50	6	15	26	40
Other Costs	251	150	462	372	539
Total Indirect Expenses	6,338	1,710	3,623	5,332	7,471
Non-Add: Military Personnel Services	190	169	498	551	875
<u>ADMINISTRATIVE EXPENSES</u>					
Materials, Supplies & Parts Used	1,518	280	677	1,050	1,538
Salaries & Wages - Regular Time	8,354	2,243	4,489	7,231	9,965
Salaries & Wages - Overtime	463	83	170	300	411
In-house Contractual Services	2,611	239	586	1,060	1,624
Other Costs	2,750	1,248	1,483	2,010	3,668
Total Administrative Expenses	15,696	4,093	7,405	11,651	17,206
In-house Non-Add: Military Personnel Services	606	305	343	387	607
<u>TOTAL COSTS INCURRED - IN-HOUSE</u>	85,170	20,405	43,597	70,188	100,956

(EXHIBIT 060106-2, TAB B)

































PROJECT REFLEX REPORT FY 1973
STATEMENT OF SPECIAL DATA ON LABOR AND EXPENDITURES
Naval Underwater Systems Center, Newport, Rhode Island

LABOR CATEGORY	(FY 1973 (Cumulative))				
	FY 1972 Actual (1)	1st Qtr Actual (2)	2nd Qtr Actual (3)	3rd Qtr Actual (4)	4th Qtr Actual (5)
<u>Direct Labor Hours</u>					
Civilian - regular time	3,559	781	1,712	2,640	3,596
Civilian - overtime	241	44	113	163	213
Civilian - total	3,800	825	1,825	2,803	3,809
Non-Add: Military Personnel	110	2	21	34	46
<u>All Indirect Except Administrative Hours</u>					
Civilian - regular time	683	172	353	542	744
Civilian - overtime	8	2	4	5	6
Civilian - total	691	174	357	547	750
Non-Add: Military Personnel	35	10	72	115	144
<u>Administrative Expense Hours</u>					
Civilian - regular time	1,310	360	689	1,058	1,430
Civilian - overtime	56	11	22	38	51
Civilian - total	1,366	371	711	1,096	1,481
Non-Add: Military Personnel	128	21	44	71	88
<u>Leave Hours</u> (All types of compensated leave)					
Non-Add: Civilian	928	310	619	835	1,029
Non-Add: Military Personnel	62	3	10	15	21
<u>Total Hours</u>					
Civilian - regular	5,552	1,313	2,754	4,240	5,770
Civilian - overtime	305	57	139	206	270
Total civilian labor hours	5,857	1,370	2,893	4,446	6,040
Non-Add: Military Personnel Total Hours	335	36	147	235	299

PROJECT REFLEX REPORT FY 1973
 STATEMENT OF SPECIAL DATA ON LABOR AND EXPENDITURES
 Naval Underwater Systems Center, Newport, Rhode Island

(EXHIBIT 060106-3, TAB C)

FY 1972 Actual (1)	FY 1973 (CUMULATIVE)			
	1st Qtr Actual (2)	2nd Qtr Actual (3)	3rd Qtr Actual (4)	4th Qtr Actual (5)

MANYEARS.

Civilian - Regular time (including leave)

Direct Labor	1,982	460	1,006	1,513	2,027
Indirect Labor	1,110	320	616	927	1,242
Total	3,092	780	1,622	2,440	3,269

Military - time (including leave)

Direct Labor	64	1	11	17	24
Indirect Labor	96	16	60	96	120
Total	160	17	71	113	144

OVERHEAD RATES (Dollars per Direct Hour)

All indirect costs other than administrative

* divided by Total Civilian Direct

Labor Hours	1.67	2.07	1.99	1.90	1.96
-------------	------	------	------	------	------

Administrative Expense (Exhibit 060106-2)

* divided by total Civilian Direct

Labor Hours	4.13	4.96	4.06	4.16	4.52
-------------	------	------	------	------	------

* Excludes OUT-OF-HOUSE Costs

PROJECT REFLEX REPORT FY 1973
STATEMENT OF SPECIAL DATA ON LABOR AND EXPENDITURES
Naval Underwater Systems Center, Newport, Rhode Island

(Exhibit 060106-3, Tab C)

	(FY 1973 Cumulative)				
	FY 1972 Actual (1)	1st Qtr Actual (2)	2nd Qtr Actual (3)	3rd Qtr Actual (4)	4th Qtr Actual (5)
<u>EXPENDITURES AND COLLECTIONS</u>					
Gross Expenditures	108,635	24,727(2)	29,259	27,822	53,833(3)
Collections	111,027	47,073(1)	26,275	28,536	30,951
Net Expenditures	(2,392)	(22,346)	2,984	(714)	22,882
<u>END OF PERIOD PERSONNEL</u>					
Civilian - Direct Hire Under Ceiling					
1. FTP					
2. Other					
3. Summer					
Subtotal	2,990	3,055	3,165	3,158	3,140
	126	120	107	90	101
	24	0	0	0	84
Civilian - Direct Hire Exempted from Ceiling	3,140	3,175	3,272	3,248	3,325
Disadvantage Youth, Stay-in-school, and Public Services					
Subtotal					
	115	19	61	63	130
	115	19	61	63	130
TOTAL Civilian Direct Hire					
Military	3,255	3,194	3,333	3,311	3,455
Officer					
Enlisted					
	41	40	41	40	37
Total	116	106	158	128	125
	157	146	199	168	162

- (1) Includes \$33,931 million applicable to advances - government. These prepayment billings were processed in accordance with verbal directions received from NAVCOMPT and NAVMAT
- (2) Includes \$2 million decrease in the cash allocation
- (3) Includes \$1 million decrease in the cash allocation

PROJECT REFLEX REPORT - FY 1972
SUMMARY SOURCES OF REVENUE
Naval Underwater Systems Center, Newport, Rhode Island
(Dollars in thousands)

(TAB A)

	BEGINNING OF FISCAL YEAR			1 JUL 71-30 JUN 72		AS OF 30 JUN 1972		
	UNBILLED BALANCE	WORK IN PROCESS	NET AVAIL	ORDERS RECEIVED	BILLING	UNBILLED BALANCE	WORK IN PROCESS	NET AVAIL
A. DEPARTMENT OF THE NAVY	47,065	-	47,065	104,271	83,456	67,880	10,891	56,989
RD&E	11,515	-	11,515	49,143	38,169	22,489	3,482	19,007
OTHER PROCUREMENT NAVY	21,237	-	21,237	26,802	21,689	26,350	4,201	22,149
SHIPBUILDING & CONVERS.	7,035	-	7,035	6,354	3,872	9,517	465	9,052
OPERATION & MAINTENANCE	6,323	-	6,323	20,033	18,189	8,167	2,405	5,762
NAVY INDUSTRIAL FUND	639	-	639	1,882	1,429	1,092	320	772
OTHER NAVY	316	-	316	57	108	265	18	247
B. OTHER DOD	439	-	439	-	342	97	7	90
C. OTHER GOVERNMENT	113	-	113	323	7	429	84	345
NON APPROPRIATED FUNDS	29	-	29	312	210	131	30	101
TOTAL REVENUES	47,646	-	47,646	104,906	84,015	68,537	11,012	57,525
TOTAL IN-HOUSE	38,117	-	38,117	83,925	67,212	54,830	8,810	46,020
TOTAL IN-HOUSE NON RD&E	20,202	-	20,202	44,480	35,622	29,060	4,669	24,391
TOTAL OUT-OF-HOUSE	9,529	-	9,529	20,981	16,803	13,707	2,202	11,505

14 August 1972

(Enclosure 1)

PROJECT REFLEX REPORT FY 1972
ANALYSIS OF COSTS INCURRED
Naval Underwater Systems Center, Newport, Rhode Island
(Dollars in Thousands)

(Exhibit 060106-2, Tab B)

	FY 72 Cumulative					FY 1973 Estimates (6)
	FY 1971 Actual (1)	1st Qtr Actual (2)	2nd Qtr Actual (3)	3rd Qtr Actual (4)	4th Qtr Actual (5)	
<u>DIRECT COSTS</u>						
Materials, Supplies & Parts Used	6,269	637	3,002	6,411	10,135	9,740
Salaries & Wages - Regular Time	27,902	7,276	15,028	23,782	32,237	38,910
Salaries & Wages - Overtime	2,159	413	1,049	1,698	2,403	1,965
In-house Contractual Services	16,784	671	3,844	7,962	14,164	28,717
Other Costs	4,219	866	1,674	2,915	4,197	4,441
Total Direct Costs	57,333	9,863	24,597	42,768	63,136	83,773
Non-Add: Military Personnel Services	132	150	301	486	597	693
<u>ALL INDIRECT COSTS OTHER THAN ADMINISTRATIVE</u>						
Materials, Supplies & Parts Used	321	8	112	200	327	298
Salaries & Wages - Regular Time	4,853	1,293	2,606	4,199	5,635	6,044
Salaries & Wages - Overtime	29	8	16	43	75	39
In-house Contractual Services	37	---	14	42	50	51
Other Costs	606	59	126	205	251	517
Total Indirect Expenses	5,846	1,368	2,874	4,689	6,338	6,949
Non-Add: Military Personnel Services	58	48	96	142	190	130
<u>ADMINISTRATIVE EXPENSES</u>						
Materials, Supplies & Parts Used	1,319	58	428	910	1,518	761
Salaries & Wages - Regular Time	7,045	1,951	3,830	6,098	8,354	9,718
Salaries & Wages - Overtime	252	91	221	345	463	338
In-house Contractual Services	1,323	203	794	1,308	2,611	2,135
Other Costs	3,456	781	2,397	3,300	2,750	3,739
Total Administrative Expenses	13,395	3,084	7,670	11,961	15,696	16,691
In-house Non-Add: Military Personnel Services	814	153	305	486	606	500
<u>TOTAL COSTS INCURRED - IN-HOUSE</u>	76,574	14,315	35,141	59,418	85,170	107,413

(Exhibit 060106-2, Tab B)

0000000000

PROJECT REFLEX REPORT FY 1972
STATEMENT OF SPECIAL DATA ON LABOR AND EXPENDITURES
Naval Underwater Systems Center, Newport, Rhode Island

LABOR CATEGORY	(FY 1972 (Cumulative))					FY 1973 Estimates
	FY 1971 Actual (1)	1st Qtr Actual (2)	2nd Qtr Actual (3)	3rd Qtr Actual (4)	4th Qtr Actual (5)	
<u>Direct Labor Hours</u>						
Civilian - regular time	3,244	821	1,693	2,628	3,559	3,912
Civilian - overtime	231	42	106	169	241	187
Civilian - total	3,475	863	1,799	2,797	3,800	4,099
Non-Add: Military Personnel	27	29	57	83	110	145
<u>All Indirect Except Administrative Hours</u>						
Civilian - regular time	639	168	329	512	683	673
Civilian - overtime	4	1	2	5	8	4
Civilian - total	643	169	331	517	691	677
Non-Add: Military Personnel	9	9	18	26	35	26
<u>Administrative Expense Hours</u>						
Civilian - regular time	1,167	323	616	960	1,310	1,342
Civilian - overtime	32	11	26	42	56	37
Civilian - total	1,199	334	642	1,002	1,366	1,379
Non-Add: Military Personnel	221	34	68	102	128	105
<u>Leave Hours</u>						
(All types of compensated leave)						
Non-Add: Civilian	850	274	582	742	928	1,030
Non-Add: Military Personnel	21	16	31	46	62	69
<u>Total Hours</u>						
Civilian - regular time	5,050	1,312	2,638	4,100	5,552	5,927
Civilian - overtime	267	54	134	216	305	228
Total civilian labor hours	5,317	1,366	2,772	4,316	5,857	6,155
Non-Add: Military Personnel Total Hours	278	88	174	257	335	345

PROJECT REFLEX REPORT FY 1972
STATEMENT OF SPECIAL DATA ON LABOR AND EXPENDITURES
Naval Underwater Systems Center, Newport, Rhode Island

	(FY 1972 (Cumulative))					FY 1973 Estimates
	FY 1971 Actual (1)	1st Qtr Actual (2)	2nd Qtr Actual (3)	3rd Qtr Actual (4)	4th Qtr Actual (5)	
<u>MANYEARS</u>						
<u>Civilian - regular time (Including Leave)</u>						
Direct Labor	1,811	1,880	1,957	1,969	1,982	2,208
Indirect Labor	1,015	1,124	1,092	1,103	1,110	1,137
Total	2,826	3,004	3,049	3,072	3,092	3,345
<u>Military - time (Including Leave)</u>						
Direct Labor	14	67	66	65	64	87
Indirect Labor	119	100	99	98	96	79
Total	133	167	165	163	160	166
<u>OVERHEAD RATES (Dollars Per Direct Hour)</u>						
All indirect costs other than administrative						
* divided by Total Civilian Direct						
Labor Hours	1.68	1.59	1.60	1.68	1.67	1.70
Administrative Expense (Exhibit 060106-2)						
* divided by total Civilian Direct						
Labor Hours	3.85	3.57	4.26	4.28	4.13	4.07
* Excludes OUT-OF-HOUSE Costs						

PROJECT REFLEX REPORT FY 1972
STATEMENT OF SPECIAL DATA ON LABOR AND EXPENDITURES
Naval Underwater Systems Center, Newport, Rhode Island

	(FY 1972 (Cumulative))					
	FY 1971 Actual (1)	1st Qtr Actual (2)	2nd Qtr Actual (3)	3rd Qtr Actual (4)	4th Qtr Actual (5)	FY 1973 Estimates (6)
<u>EXPENDITURES AND COLLECTIONS</u> (Dollars in thousands)						
Gross Expenditures	86,652	18,673	29,521	26,471	33,970(2)	132,788
Collections	84,534	22,215(1)	28,900	29,219	30,693	132 7
Net Expenditures	2,118	(3,542)	621	(2,748)	3,277	501
<u>END OF PERIOD PERSONNEL</u>						
Civilian - Direct Hire Under Ceiling						
1. FTP	2,756	2,903	2,913	2,918	2,990(3)	3,184
2. Other	93	111	157	190	126	116
3. Summer	87	0	0	0	24	0
Subtotal	2,936	3,014	3,070	3,108	3,140	3,300
Civilian - Direct Hire Exempted from Ceiling						
1. Disadvantage	59	0	0	0	115	43
2. Stay-in-school	11	33	34	34	0-19*	8
3. Junior Fellowship	0	0	0	0	0	0
Subtotal	70	33	34	34	115-134*	51
TOTAL Civilian Direct Hire	3,006	3,047	3,104	3,142	3,274 3,255*	3 1
Military						3351
Officer	30	42	48	46	41	40
Enlisted	94	144	119	143	116	126
Total	124	186	167	189	157	166
(1) Includes \$10 million authorization						
(2) Includes 3 million decrease to authorization						
(3) Includes 65 employees who left on 6/30/72						

14 August 1972

Page 3 of 3

(Enclosure 3)

* Changed to agree with OCSM Rep.
per J. Rogers 8/21/72

DATE 28 August 1971

SUMMARY OF SOURCES OF REVENUE
OPERATING BUDGET AND FISCAL YEAR TO 30 JUN 1971 REPORT
(ENTRIES IN THOUSANDS)

INSTALLATION - Naval Underwater Systems Center Newport, R. I.

	Beginning of FY 1971			Period Transactions			End of Reporting Period		
	Unbilled Balance (1)	WIP (2)	Net Avail. (3)	Orders Received (4)	Billings (5)	Unbilled Balance (6)	WIP (7)	Net Avail. (8)	
Appropriations									
a. Navy									
RDTE	49,264	5,949	43,315	89,493	91,303	47,454	-	47,454	
OPN	14,976	2,900	12,076	38,759	41,930	11,805	-	11,805	
OCEAN	18,246	1,559	16,687	26,525	23,736	21,035	-	21,035	
SCN	7,783	1,155	6,628	19,413	20,431	6,765	-	6,765	
OTHER	7,476	167	7,309	3,486	3,859	7,103	-	7,103	
	783	168	615	1,310	1,347	746	-	746	
b. Army	-	-	-	50	-	50	-	50	
c. Air Force	128	32	96	-	108	20	-	20	
d. Other Gov't Dept.	12	-	12	113	10	115	-	115	
Non-Appropriated Funds, Individuals and Others	14	13	1	157	164	7	-	7	
Total	49,418	5,994	43,424	89,813	91,585	47,646	-	47,646	
Total Out-Of-House	11,987	1,839	10,148	7,185	7,327	11,845	-	11,845	
Total-In-House	37,431	4,155	33,276	82,628	84,258	35,801	-	35,801	
In-House Non RDTE	26,953	2,358	24,595	46,970	45,682	28,241	-	28,241	

TAB A

PROJECT REFLEX REPORT
Statement of Special Data on Labor and Expenditures
(In Thousands of Dollars)

Date 28 August 1971
Exhibit 060106-3
Page 1 of 3

Installation Naval Underwater Systems Center, Newport, R. I.

	FY 1970 Actual	FY 1971 1st Qtr	Actual 2nd Qtr	(Cumulative) 3rd Qtr	4th Qtr	FY 1972 Estimate
	(1)	(2)	(3)	(4)	(5)	(6)
<u>Labor Hours (000)</u>						
<u>Direct Labor</u>						
Civilian-regular time	3,067	804	1,587	2,407	3,244	3,538
Civilian-overtime	158	46	109	163	231	197
Civilian-total	3,225	850	1,696	2,570	3,475	3,735
Non-Add: Military Personnel	33	6	12	20	27	34
<u>All indirect except Administrative</u>						
Civilian-regular time	668	164	319	479	639	617
Civilian-overtime	3	1	1	3	4	4
Civilian-total	671	165	320	482	643	621
Non-Add: Military Personnel	45	1	3	6	9	10
<u>Administrative Expense</u>						
Civilian-regular time	1,194	303	575	870	1,167	1,304
Civilian-overtime	29	5	13	22	32	29
Civilian-total	1,223	308	588	892	1,199	1,333
Non-Add: Military Personnel	167	52	103	161	221	221
<u>Leave Hours (all types of compensated leave)</u>						
Civilian	891	268	519	682	850	951
Non-Add: Military Personnel	16	5	10	15	21	33
<u>Total Hours</u>						
Civilian-regular time	4,929	1,271	2,481	3,756	5,050	5,459
Civilian-overtime	190	52	123	188	267	230
Civilian-total	5,119	1,323	2,604	3,944	5,317	5,689

PROJECT REFLEX REPORT
Statement of Special Data on Labor and Expenditures
(In Thousands of Dollars)

Date 28 August 1971
Exhibit 060106-3
Page 2 of 3

Installation Naval Underwater Systems Center, Newport, R. I.

	FY 1970 Actual	FY 1971 1st Qtr	Actual 2nd Qtr	(Cumulative) 3rd Qtr	4th Qtr	FY 1972 Estimate
	(1)	(2)	(3)	(4)	(5)	(6)
Civilian-Non-Pay Hours	24	6	10	12	14	-
Non-Add: Military Personnel Total Hours	261	64	128	202	278	298
Total Labor Hours	6,034	1,597	3,133	4,638	6,181	6,938
Manyears 1/						
Civilian-regular time						
Direct Labor	1,733	467	917	1,359	1,811	2,074
Indirect & Administrative Labor	1,049	270	521	766	1,015	1,126
Total	2,782	737	1,438	2,125	2,826	3,200
Military-regular time						
Direct Labor	17	3	5	11	14	18
Indirect & Administrative Labor	110	27	56	86	119	124
Total	127	30	61	97	133	142
Military-overtime						
Direct Labor	-	-	-	-	-	-
Indirect & Administrative Labor	-	-	-	-	-	-
Overhead Rates						
*All indirect other than administrative divided by Total Civilian Direct Labor Hours	1.97	1.93	1.79	1.73	1.68	1.57
*Administrative expense (Exhibit 060106-2 divided by Total Civilian Direct Labor Hours)	3.42	3.51	3.64	3.80	3.85	3.28
*Excludes out-of-house costs						

Date 28 August 1971
Exhibit 060106-3
Page 3 of 3

Installation Naval Underwater Systems Center, Newport, R. I.

	FY 1970 Actual (1)	FY 1971 1st Qtr (2)	Actual 2nd Qtr (3)	(Cumulative) 3rd Qtr (4)	4th Qtr (5)	FY 1972 Estimate (6)
<u>Expenditures and Collections</u>						
Gross Expenditures	71,797	25,842	53,951	70,302	86,652	90,682
Collections	71,958	25,083	52,647	68,591	84,534	95,226
Net Expenditures	(161)	759	1,304	1,711	2,118	(4,544)
<u>End of Period Personnel</u>						
Civilian-Direct Hire	2,865	2,777	2,798	2,796	2,936	3,014
Military						
Officers	28	25	29	30	30	35
Enlisted	95	95	99	86	94	94
<u>Civilian Personnel</u>						
Full Time Permanent	2,670	2,676	2,732	2,709	2,756	2,809
Temporary Part-Time	75	101	66	87	106	77
Summer Student Program	120	-	-	-	74	128
Summer Aids	108	-	-	-	59	110

Date 28 August 1971

PROJECT REFLEX REPORT

Analysis of Costs Incurred

(In Thousands of Dollars)

Exhibit 060106-2

Installation Naval Underwater Systems Center, Newport, R. I.

	FY 1970 Actual	FY 1971 Actual 1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	FY 1972 Estimate
	(1)	(2)	(3)	(4)	(5)	(6)
<u>Direct Costs</u>						
Materials, Supplies & Parts Used	6,698	1,462	2,792	4,529	6,269	6,374
Salaries, & Wages-Regular Time	24,012	6,755	13,468	20,696	27,902	33,245
Salaries & Wages-Overtime	1,090	416	1,006	1,533	2,159	2,020
In-house Contractual Services	13,469	4,226	7,247	11,975	16,784	5,688
Other Costs	2,072	638	1,560	2,697	4,219	4,146
Total Direct Costs (In-House)	47,341	13,497	26,073	41,430	57,333	51,473
Non-Add: Military Personnel Services	165	28	62	104	132	1,176
<u>Indirect Costs other than Administrative</u>						
Materials, Supplies & Parts Used	387	64	162	244	321	185
Salaries & Wages-Regular Time	4,759	1,163	2,351	3,624	4,853	5,317
Salaries & Wages-Overtime	17	6	11	20	29	40
In-house Contractual Services	55	48	53	25	37	-
Other Costs	1,142	360	457	537	606	307
Total Indirect Expenses (In-House)	6,360	1,641	3,034	4,450	5,846	5,849
Non-Add: Military Personnel Services	200	11	26	42	58	57
<u>Administrative Expenses</u>						
Materials, Supplies & Parts Used	1,155	262	555	927	1,319	1,054
Salaries & Wages-Regular Time	6,577	1,707	3,401	5,294	7,045	9,013
Salaries & Wages-Overtime	169	39	108	173	252	249
In-House Contractual Services	1,319	255	504	913	1,323	-
Other Costs	1,813	717	1,612	2,458	3,456	1,919
Total Administrative Expenses (In-House)	11,033	2,980	6,180	9,765	13,395	12,235
Non-Add: Military Personnel Services	319	200	395	611	814	910
Total Costs Incurred (In-House)	64,734	18,118	35,287	55,645	76,574	69,557
Increase (-) or Decr. (+) in Unbilled Costs	(5,994)	(383)	1,285	1,164	5,994	(5,100)
Total out-of-house Costs	9,010	2,207	4,718	6,878	9,245	22,264

NOTE: \$50K Patent Counsel Cost not included in this report.

TAB C